

REMARKS

Applicant is in receipt of the Office Action mailed February 24, 2006. Claims 1-34 were rejected. Claims 12 and 30-34 have been canceled. New claims 35 and 36 have been added. Claims 1, 16, and 18 have been amended. Claims 1-11, 13-29, and 35-36 are currently pending in the application.

Section 103 Rejections

Claims 1-34 were rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson et al., U.S. Patent No. 6,912,635 (hereinafter "Patterson") in view of features of which the Examiner took Official Notice. Applicant respectfully traverses these rejections.

Amended claim 1 recites in pertinent part, "wherein said determining the list of most frequently used chunks and said balancing the most frequently used chunks across the plurality of storage devices are performed repeatedly at time intervals." A similar limitation was previously recited in claim 12 (now canceled). With respect to claim 12, the Examiner states that, "the further claimed limitations would also necessarily follow when the Patterson system is configured to monitor addresses in the units of chunks". Applicant respectfully disagrees. Patterson teaches redistributing high access data across storage components a single time, where the redistribution is performed at a least disruptive time (see Col.8, lines 42-67). Patterson does not teach repeatedly determining a list of most frequently used chunks at time intervals, as recited in claim 1. Patterson also does not teach repeatedly balancing the most frequently used chunks across the plurality of storage devices at time intervals.

Applicant thus respectfully submits that claim 1 is patentably distinct over Patterson. Inasmuch as independent claims 16 and 18 recite similar limitations as claim 1, Applicant respectfully submits that these claims are also patentably distinct over Patterson.

New claim 35 recites a computer-readable memory medium comprising program instructions executable to, in pertinent part, "receive user input specifying a size N for a list of most frequently used chunks" and "determine the list of N most frequently used

chunks based on the data indicating the number of accesses to each chunk,” and “balance the N most frequently used chunks across the plurality of storage devices.” Similar limitations are recited in claim 6. The Examiner rejected claim 6 on the basis that graphical user interfaces are known in the prior art for the purpose of “displaying information to be monitored and/or control parameters”. However, Applicant is not claiming the general concept of using a graphical user interface to display information to be monitored and/or control parameters, but instead claims the specific limitation of receiving user input specifying a size N for a list of most frequently used chunks, where the N most frequently used chunks are to be balanced across the plurality of storage devices. Applicant respectfully submits that specifying a size N for a list of most frequently used chunks for the purpose of balancing the N most frequently used chunks across a plurality of storage devices is a novel feature that is unknown in the prior art. If the Examiner believes that this feature is known in the prior art then Applicant respectfully requests that the Examiner provide a reference teaching this feature.

New claim 36 recites a computer-readable memory medium comprising program instructions executable to, in pertinent part, “receive user input specifying a chunk size,” and “monitor accesses to chunks of the specified chunk size,” and “balance the most frequently used chunks across the plurality of storage devices”. Similar limitations are recited in claim 7. Similarly as discussed above with respect to claim 6, the Examiner rejected claim 7 without citing any prior art reference that teaches the specific limitations recited in claim 7. Applicant respectfully submits that specifying a chunk size for the purpose of balancing the most frequently used chunks of that specified chunk size across a plurality of storage devices is a novel feature that is unknown in the prior art. If the Examiner believes that this feature is known in the prior art then Applicant respectfully requests that the Examiner provide a reference teaching this feature.

For similar reasons, Applicant also respectfully traverses the Examiner’s rejection of claim 8 and submits that, “receiving user input specifying a chunk size for each volume” and “for each volume, monitoring accesses to chunks located in the volume having the specified chunk size for the volume” are novel features that are unknown in the prior art.

For similar reasons, Applicant also respectfully traverses the Examiner's rejection of claim 10 and submits that, "displaying information indicating the number of accesses to each chunk" is a novel feature that is unknown in the prior art.

With respect to claims 14 and 15, the Examiner asserts that, "selecting a memory location that can be accessed rapidly such as the center of a disk for storing most frequently accessed data has also been known and commonly practiced in the pertinent art". However, Applicant is unaware of any prior art that teaches the combination of features recited in claims 14 and 15. More specifically, Applicant is unaware of any prior art that teaches a balancing method that involves determining a location on a second storage device at which a most frequently used file system cluster can be accessed rapidly and relocating the file system cluster to the determined location on the second storage device from a first storage device. Applicant is also unaware of any prior art that teaches the above features and also teaches that the file system cluster is relocated to a location near the center of a disk. Applicant respectfully requests that the Examiner provide a single prior art reference teaches these features or multiple references that render these features *prima facie* obvious.

Applicant also respectfully submits that numerous ones of the other dependent claims recite further distinctions over the prior art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5760-12800/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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